State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-178

Relating to Certification of New Heavy-Duty Motor Vehicle Engines
CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Cummins Engine Company, Inc. 1997 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Compressed Natural Gas or Liquid Natural Gas (CNG or LNG)

Engine Family	<u>Liters</u>	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
VCE611EBCARW (433E)	10	611	Charge Air Cooler Turbocharger Powertrain Control Module Heated Oxygen Sensor

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake-horsepower-hour:

Non-Methane Carbon <u>Hydrocarbons</u> <u>Monoxide</u>		Nitrogen Oxides	<u>Particulates</u>
1,2	15.5	5.0	0.10

The following are the certification exhaust emission values for this engine family in grams per brake-horsepower-hour:

Engine	Non-Methane	Carbon	Nitrogen	<u>Particulates</u>
Family	Hydrocarbons	<u>Monoxide</u>	<u>Oxides</u>	
VCE611EBCARW (611E)	1.1	11.2	3.5	0.06

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

CUMMINS ENGINE COMPANY, INC.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this $23^{\mu\nu}$ day of December 1996.

R B. Summerfield, Chief

Mobile Source Operations Division

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199<u>7</u> AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family (433E)VCE611EBCARW						
Displacement: / 10 Liters						
Maximum Rated Power: 300 HP@ 2100 RPM Engine Configuration: I-6						
Ignition: Compression Compression with Glow Plug Spark X						
Fuel Type(s): Dedicated_ Flex-Fuel_ Dual-Fuel_ Diesel_ MI00_ M85_						M85
		CNG <u>X</u> LN				
Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94						
Delivery Internal of Complete Classics					Urban Bus_	
Exhaust ECS (inc	lude.MFI, TC, C	AC): <u>HO2S</u>			O CEPOL	
		Fuel Dass		ns per SAE J193	, , , , , , , , , , , , , , , , , , ,	T
Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm3 / stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
L10-300G (2110)	300 @ 2100		N/A	3922724 3930507	N/A	3928277
L10-280G (2110)	280 @ 2100		N/A	3922724 3930507	N/A	3928277
Date Issued:						
Revisions:						